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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,220	11/20/2001	Terence J. Knowles	13051US03	6206

7590

11/20/2002

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,220

Applicant(s)

KNOWLES ET AL. *M*

Examiner

Kimnhung Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-14 and 19 is/are rejected.
- 7) ☒ Claim(s) 6-8, 15-18 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

This application has been examined. The original claims 1-20 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gomes et al. (US patent 6,473,075) in view of Weigers et al. (US patent 5,856,820).

Regarding claims 1 and 10, Gomes et al. disclose in figures 1, and 7-10 that an acoustic wave switch comprising a substrate (101); a driver (figures 1,7 and 9,) generating an acoustic wave in the acoustic wave, wherein a touch on a touch surface of the acoustic wave produces a detectable change in the acoustic wave; and a feedback mechanism (see column 13, lines 36-58) to provide tactile to use that a switch (1313, 1315) actuated by touch (143, figure 1, column 8, lines 60-67 and column 8, lines 1-18) on the touch surface (100). However, Gomes et al. do not disclose that the mesa formed on the substrate that defines an acoustic wave cavity. Weigers et al. disclose that a shear wave backplate in order to form a cavity between the substrate and backplate, that is an acoustic wave cavity (see abstract, see figure 1, column 4, lines 33-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of using an acoustic wave as taught by Weigers et al. in the device of Gomes et

Art Unit: 2674

al. because this would use of the similar and dissimilar materials for the substrate and backplate.

3. Claims 2-5 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gomes et al. (S patent 6,473,075) and Weigers et al. (US patent 5,856,820) as applied to claims 1, 10 and 19 above, and further in view of Huang et al. (US patent 5,451,723).

Regarding claims 2-5 and 9-14 are dependent upon claims 1 and 10, and rejected on the same reasons set forth in claims 1 and 10. Furthermore, Gomes et al. do not disclose that wherein the feedback mechanism includes a member that overlies the touch surface and includes a deformable dome. Huang et al. disclose a member that overlies the touch surface (16) and a deformable dome (see abstract, see column 3, lines 59-66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of using the member that overlies the touch surface as taught by Huang et al. in the device of Gomes et al. and Weigers et al. as discussed above because this would provide the deformation of the elastomeric substrate absorbing or damping acoustic wave energy like a finger touch on the acoustic wave touch sensor.

Allowable Subject Matter

4. Claims 6-8, 15-18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2674

5. The following is a statement of reasons for the indication of allowable subject matter:

None of the cited art teaches or suggests that an acoustic wave switch, wherein the member includes an acoustic wave absorber on a surface thereof overlying the touch surface and at least one magnet to hold the member in an punctuated position until a force acting on the member actuates the switch, and the magnet returning the member to an unactuated position when the force is removed or wherein the feedback member includes a rocker having a pivot with a magnet mounted on the rocker on a first side of the pivot to hold the feedback member in an unactuated position when the force is removed.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Art Unit: 2674

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen
November 13, 2002



RICHARD HUERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600